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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,424	02/13/2004	Robert H. Wollenberg	T-6319 (538-67)	9079

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EXAMINER	
LARKIN, DANIEL SEAN	
ART UNIT	**PAPER NUMBER**
2856	

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/779,424	WOLLENBERG, ROBERT H.
	Examiner	Art Unit
	Daniel S. Larkin	2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) *11-18 and 25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,19-24 and 26-38* is/are rejected.

7)☒ Claim(s) *9 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *18 May 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

NOTE: Claims 10-39 have been renumbered 9-38 since original claim 9 is missing.

Election/Restrictions

1. Applicant's election without traverse of claims 1-10, 19-24, and 26-39 in the reply filed on 22 June 2005 is acknowledged.

2. Claims 11-18 and 25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 22 June 2005.

Claim Objections

3. Claims 1-10, 19-24, and 26-38 are objected to because of the following informalities:

Re claim 1, claim line 4: A -- colon -- should be inserted after the term "comprising".

Re claim 1, claim line 5: A -- comma -- should be inserted after the term "additive".

Re claim 1, claim line 8: The "comma" after the conjunction "and" should be deleted.

Re claim 3, claim line 2: A -- colon -- should be inserted after the term "consisting of".

Re claim 3, claim line 5: A -- comma -- should be inserted after the term "agents".

Re claim 5, claim line 2: A -- colon -- should be inserted after the term "consisting of".

Re claim 5, claim line 8: A -- comma -- should be inserted after the term "succinimides".

Re claim 26, claim lines 1 and 2: The phrase "the step (c) of automatically outputting the results of step (b)" lacks antecedent basis. Claim 1, step (c) does not previously recite an automated output.

Re claim 27, claim line 2: The phrase "the microprocessor" lacks antecedent basis.

Re claim 29, claim line 4: A -- colon -- should be inserted after the term "comprising".

Re claim 29, claim line 5: A -- comma -- should be inserted after the term "additive".

Re claim 29, claim line 9: The "comma" after the conjunction "and" should be deleted.

Re claim 36, claim line 2: A -- colon -- should be inserted after the term "consisting of".

Re claim 36, claim line 5: A -- comma -- should be inserted after the term "agents".

Re claim 38, claim line 3: A -- colon -- should be inserted after the term "comprising". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claims 4 and 37: In view of the fact that applicant elected ashless dispersant as a species in claims 3 and 36, claim 4 and 37 now fail to further limit the claimed invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 6, 7, and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,427,834 (Martin).

With respect to the limitations of claim 1, the reference to Martin discloses a testing process for the evaluation of a dispersant-VI improver product, whereby

dispersancy performance of a plurality of samples is compared, TABLE I. In each sample, a major amount of at least one base oil is used; a minor amount of a lubricating additive is used; and the mixture of the base oil and the additive is mixed with a base insoluble-oil material. The dispersancy of each sample is measured and recorded as a ratio in TABLE I, col. 11, lines 20-68.

With respect to the limitation of claim 2, the reference discloses that the base oil may comprise mineral lubricating oils.

With respect to the limitation of claims 3 and 4, the reference to Martin discloses that two different ashless dispersants, Amoco 9250 and Lubrizol 6401, were used in comparison dispersancy tests.

With respect to the limitations of claims 6 and 7, the reference to Martin discloses that the mixture of the base oil and the additive is mixed with a sludge containing oil.

With respect to the limitations of claims 19-22, the reference to Martin discloses that two drops of each lubricating oil composition/solution is placed with an eyedropper on separate filter papers.

8. Claims 1-8 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,384,138 (Karll et al.).

With respect to the limitations of claim 1, the reference to Karll et al. discloses a process of manufacturing phenols and a testing process for the evaluation of a Mannich product, whereby dispersancy performance of a plurality of samples is compared, TABLE I. In each sample, a major amount of at least one base oil is used; a minor

amount of a lubricating additive is used; and the mixture of the base oil and the additive is mixed with a base insoluble-oil material. The dispersancy of each sample is measured and recorded as a ratio in TABLE I, col. 6, lines 15-68 and col. 7, lines 1-13.

With respect to the limitation of claim 2, the reference discloses that the base oil comprises mineral lubricating oils. Additionally, the reference discloses that the compositions of the invention are useful as additives in animal and vegetable oils as well.

With respect to the limitation of claims 3-5, the reference to Karll et al. discloses that the additive is a Mannich product that is used to improve the dispersancy properties of the oil. A number of samples, as shown in TABLE I are compared.

With respect to the limitations of claims 6-8, the reference to Karll et al. discloses that the additive is thoroughly mixed with used crankcase oil having sludge contained within.

With respect to the limitation of claim 28, the reference to Karll et al. discloses that that the Mannich additive product was diluted with oil, see EXAMPLE 2.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,427,834 (Martin).

With respect to the limitation of claim 24, the reference to Martin discloses that the lubricating oil composition is shaken to homogenize the sample. The examiner argues that shaking the sample is functionally equivalent to mechanically stirring the sample to achieve homogenization of the sample.

11. Claims 26, 27, 29, and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,427,834 (Martin) in view of US 2004/0123650 (Kolosov et al.).

With respect to the limitations of claim 26, the reference to Martin fails to disclose converting the information to a digital signal and sending the information to a microprocessor. The reference to Kolosov et al. discloses an apparatus for high throughput rheological testing of material, whereby the apparatus is employed to screen flowable samples, such as oil. Additionally, the apparatus is used to analyze the resulting properties of a particular flowable material or the relative or comparative effects that an additive has upon a particular flowable sample material. The reference to Kolosov et al. discloses the use of a computer or microprocessor to receive and sore data, such as responses of samples. Providing automation and a microprocessor to an apparatus or process that engages in multiple sampling would be obvious to one of ordinary skill in the art as a means of eliminating human interference which would help to speed up the sampling, processing, and storage of the collected information.

With respect to the limitations of claim 27, the reference to Martin fails to disclose creating a combinatorial library of oil composition from a stored database. The reference to Kolosov et al. discloses an apparatus for high throughput rheological testing of material. The reference discloses that the same apparatus is utilized to screen and categorize a library of samples. Providing the apparatus to construct a library of samples would have been obvious to one of ordinary skill in the art as a means of allowing one to cross reference unknown compositions with known samples for more accurate sampling and assessment.

With respect to the limitations of claim 29, the reference to Martin discloses a method for screening lubricant and additive performance utilizing a plurality of samples contained on a substrate, wherein the sample comprises, a major amount of at least one base oil; a minor amount of a lubricating additive; and a base insoluble-oil material mixed with the oil and additive mixtures. The dispersancy of each sample is measured and recorded as a ratio in TABLE I, col. 11, lines 20-68. The reference to Martin fails to disclose a plurality of test receptacles, receptacle moving means; and transferring the dispersancy data a computer controller. The reference to Kolosov et al. discloses an apparatus for high throughput rheological testing of material, whereby the apparatus is employed to screen flowable samples, such as oil. Additionally, the apparatus is used to analyze the resulting properties of a particular flowable material or the relative or comparative effects that an additive has upon a particular flowable sample material. The reference to Kolosov et al. further discloses the use of a computer or microprocessor to receive and sore data, such as responses of samples. Providing

automation and a microprocessor to an apparatus or process that engages in multiple sampling would be obvious to one of ordinary skill in the art as a means of eliminating human interference which would help to speed up the sampling, processing, and storage of the collected information.

With respect to the limitation of claim 35, the reference to Martin disclose that the base oil is a natural oil.

With respect to the limitation of claims 36 and 37, the reference to Martin discloses that two different ashless dispersants, Amoco 9250 and Lubrizol 6401, were used in comparison dispersancy tests.

With respect to the limitations of claim 38, the reference to Martin discloses a method for screening lubricant and additive performance utilizing a plurality of samples contained on a substrate, wherein the sample comprises, a major amount of at least one base oil; a minor amount of a lubricating additive; and a base insoluble-oil material mixed with the oil and additive mixtures. The dispersancy of each sample is measured and recorded as a ratio in TABLE I, col. 11, lines 20-68. The reference to Martin fails to disclose creating a combinatorial library of oil composition from a stored database. The reference to Kolosov et al. discloses an apparatus for high throughput rheological testing of material. The reference discloses that the same apparatus is utilized to screen and categorize a library of samples. Providing the apparatus to construct a library of samples would have been obvious to one of ordinary skill in the art as a means of allowing one to cross reference unknown compositions with known samples for more accurate sampling and assessment.

12. Claims 30, 31, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,427,834 (Martin) in view of US 2004/0123650 (Kolosov et al.) as applied to claim 29 above, and further in view of US 6,451,259 (Cohen et al.).

With respect to the limitation of claim 30, the references to Martin and Kolosov et al. both fail to disclose receptacle moving means that comprise a movable carriage. The reference to Cohen et al. discloses that the receptacles are held within a rack which is mounted on a rail for movement within an analyzer. Providing a movable carriage for the receptacles would have been obvious to one of ordinary skill in the art as a means of increasing the positional flexibility of the analyzer by allowing the receptacles to move.

With respect to the limitation of claim 31, the reference to Martin and Kolosov et al. both fail to disclose a robot arm that grasps and moves an individual receptacle. The reference to Cohen et al. disclose that after the test tubes are output from modules in the instrument after processing, a robot arm grasps the test tubes and places them in a front most rack until that rack is full of test tubes. Providing a robotic arm to move samples would have been obvious to one of ordinary skill in the art as a means of increasing the positional flexibility of the analyzer by allowing the receptacles to undertake different tests out of any particular order.

With respect to the limitations of claim 33, the references to Martin and Kolosov et al. fail to disclose the placement of a bar code on each receptacle. The reference to discloses that each receptacle is provided with a bar code. Labeling each receptacle with a bar code would have been obvious to one of ordinary skill in the art as an efficient

means of identifying the contents of a receptacle and identifying the location of each sample in the analyzer.

With respect to the limitations of claim 34, the references to Martin and Kolosov et al. fail to disclose the utilization of a bar code reader. The reference to discloses that a bar code reader is utilized to read the bar code on each receptacle. Providing a bar code reader would have been obvious to one of ordinary skill in the art as an efficient means of identifying the contents of a receptacle and identifying the location of each sample in the analyzer.

Allowable Subject Matter

13. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The reference to US 4,402,844 (Trepka) discloses a dispersancy test, whereby carbon black is stirred into a mixture of base oil and an ashless dispersant.

The reference to US 4,219,432 (Girgenti et al.) discloses a process of manufacturing additives for lubricants, whereby a blended formulation is created from crankcase oil, an ashless dispersant, and a mineral lubricating oil blend of base stocks.

The blended formulation was tested to evaluate the formulation's ability to keep sludge in suspension and to prevent the deposition of varnish on engine parts.

The reference to US 4,255,589 (Wisotsky) discloses a process for the production of lubricant additives, whereby used crankcase oil containing sludge precursors is mixed with a sludge inhibition additive. The mixture is heated and any new deposits of sludge in the crankcase oil are separated and weighed.

The reference to US 5,849,047 (Yu et al.) discloses the utilization of polymeric compounds generated from Mannich base macromonomers as lubricant oil and fuel additives and their spot dispersancy ratings versus other known additives.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Larkin whose telephone number is 571-272-2198. The examiner can normally be reached on 8:00 AM - 5:00 PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Larkin
AU 2856
07 September 2005

DANIEL S. LARKIN
PRIMARY EXAMINER